Hearing Conservation Program

TCFFS&HC

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Objectives

- Exposure limit
- What equipment is needed
- How to survey noise to determine exposure level
- Hierarchy of Controls
- Hearing Protection
- Audiometric Testing

Exposure Limit

- 29 CFR 1910.95 https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_id=9735&p_table=STANDARDS
- The employer shall administer a continuing, effective hearing conservation program, as described in paragraphs (c) through (o) of this section, whenever employee noise exposures equal or exceed an 8-hour time-weighted average sound level (TWA) of 85 decibels measured on the A scale (slow response) or, equivalently, a dose of fifty percent.

Equipment

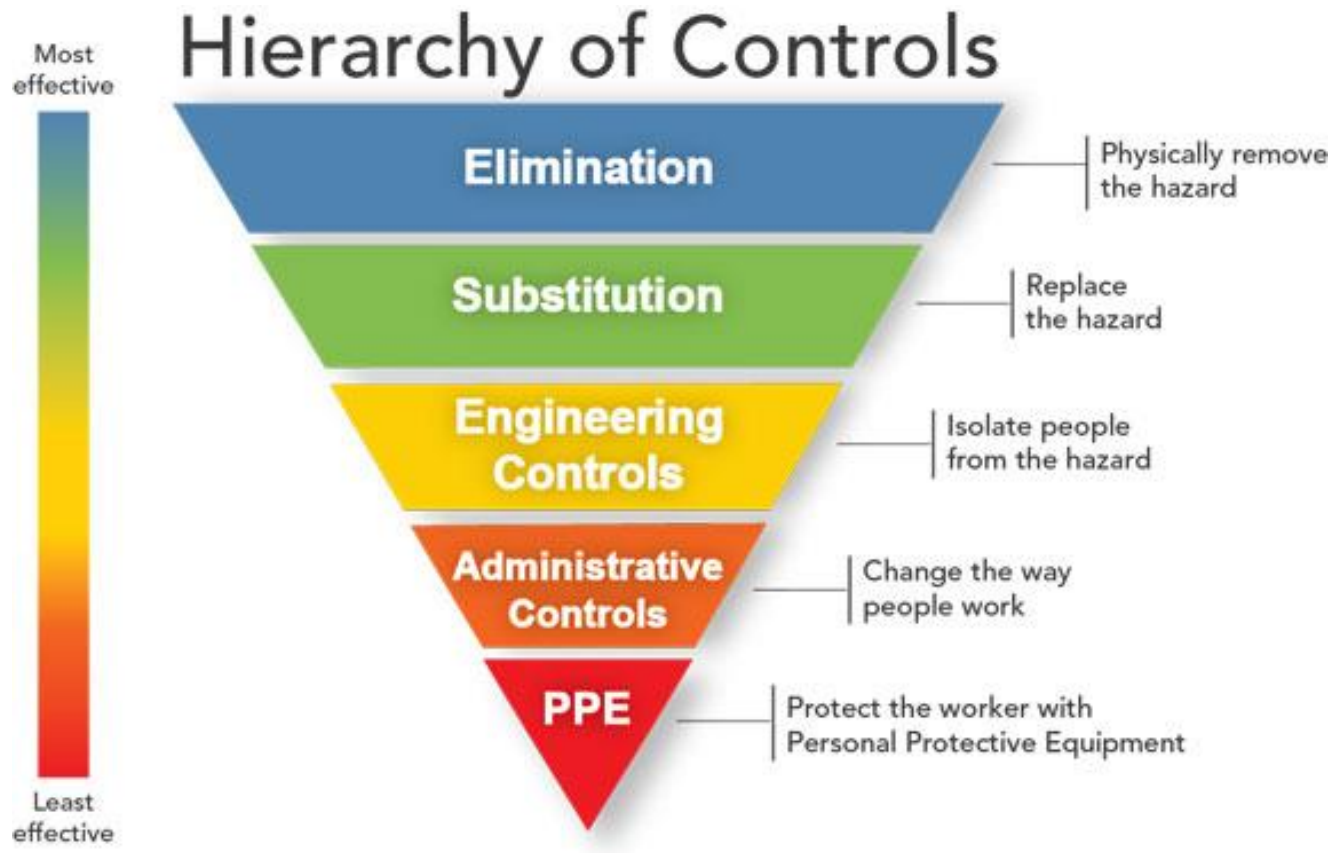
- For purposes of the hearing conservation program, employee noise exposures shall be computed in accordance with appendix A and Table G-16a, and without regard to any attenuation provided by the use of personal protective equipment.
  - Sound Level Meter (SLM) to take quick readings as you do a walkaround survey. Can be used to estimate 8 hour exposure such as if noise is constant and employee stays at that spot all day. Follow up with a dosimeter sampling.

Dosimeter (this may be used in lieu of a SLM in a pinch) to be placed on the employee for 8 hours plus. The results will indicate if you need a hearing conservation program . Look at % dose and TWA.

Noise Survey

- Walk through facility to look for sources of noise.
- Include grounds crew, boiler plant, equipment repair, vehicle repair and so on.
- Ask staff to run equipment for you if possible.
- Obtain floor/equipment blueprints if desired. Ex. Boiler Plant.
- Interview staff on hours worked on each equipment.
- Document your readings.
- Decide where to do 8 hour sampling.

Hierarchy of Controls



https://www.cdc.gov/niosh/topics/noisecontrol/default.html

Other sources of information

- https://www.pca.state.mn.us/sites/default/files/p-gen6-01.pdf
- http://www.nyc.gov/html/dep/html/noise/index.shtml

Hearing Protection

- The NRR (Noise Reduction Rating) is the maximum protection that could be achieved if the plug fit the wearer perfectly and was inserted correctly.
- In most work situations attenuation is half of the listed NRR. For example, if the NRR is 30 the hearing protector most likely blocks out 15 decibels of noise.
- Provided at no cost to employee.
- May be used in combination of earplugs and earmuffs but you can only add 5 decibels to the higher of the two.

Disposable Ear Plugs

- ***Pros***
- Fits many different ear canals
- Usually has higher NRR compared to other protective devices
- Initially less expensive compared to others
- Maintenance free; can toss instead of clean
- ***Cons***
- Can be difficult to insert
- If not properly inserted, you may not get the highest NRR possible
- More expensive over time

Reusable Ear Plugs

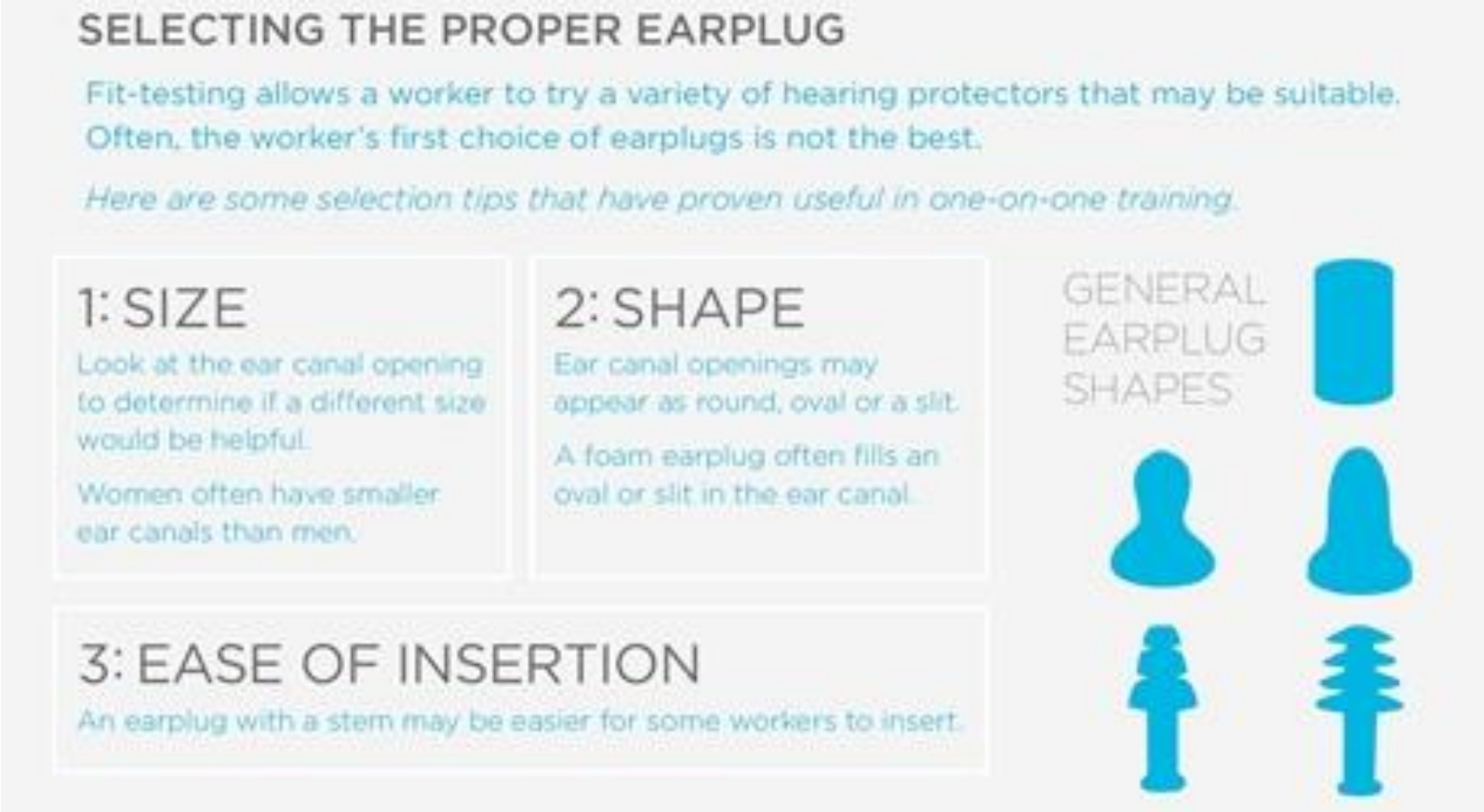
- ***Pros***
- Easily inserted and worn
- More economical over time compared to disposable plugs
- ***Cons***
- Pre-formed so does not fit as wide a variety of ear canals as disposables
- Must take time to clean to avoid infection

Earmuffs and Stereo Earmuffs

- ***Pros***
- Easy to use and wear
- Can get stereo muffs, which makes working more fun and comfortable, and also more productive
- Requires less training to use correctly compared to plugs
- More economical in the long run compared to earplugs
- ***Cons***
- Needs more storage space
- Must take time to clean to avoid infection
- Sometimes gets more uncomfortable in warmer weather compared to plugs
- Can make wearing other PPE such as glasses more cumbersome

Selection of Earplugs

- Size can matter so offer different sizes



Testing for fit

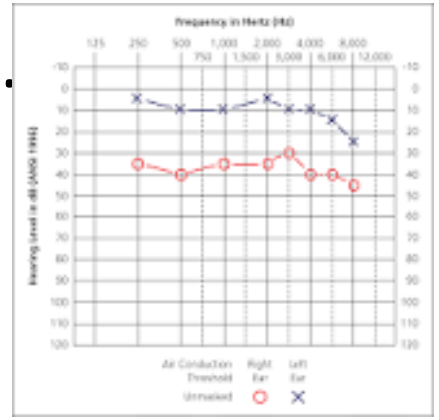
- Several earplug manufacturers offer equipment that measure the protection provided by their earplugs for individuals.
- Please consult with the manufacturer of your earplugs to see if they have offer this equipment.
- The following ppt by 3M was from a Michigan Safety Conference and covers a lot of information.

http://www.michsafetyconference.org/index.php/why-title-this/399-ih-wed-9-00-am-selecton-fitting-and-validation-testing-of-passive-hearing-protection/file

Test System	Category	Obj. / Subj.	HPs Tested	Results
3M™ E-A-Rfit 4	F-MIRE	Objective	4 Foam Plugs	Comparability to benchmark varied between systems. Refer to the source publication for details.
Svantek SV102	F-MIRE	Objective	2 Ear Muffs	
Honeywell VeriPRO™	Loudness Balance	Subjective	4 Foam Plugs	
CAPA	Pure-tone audiometry	Subjective	2 Custom Plugs 1 Pre-Molded Plug 1 Foam Plug	

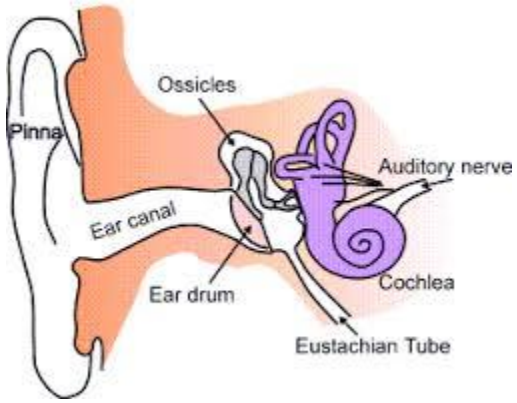
Audiometric Testing

- Employers must make audiometric testing available at no cost to all employees who are exposed to an action level of 85 dB or above, measured as an 8-hour TWA.
- A licensed or certified audiologist, otolaryngologist, or other physician must be responsible for the program. Both professionals and trained technicians may conduct audiometric testing.
- Employers must provide annual audiograms within 1 year of the baseline.
- Employers must notify employees within 21 days after the determination that their audiometric test results show an STS.
- Refit/retrain/reevaluate PPE



Train and Observe Employees Using Their PPE

- Employers must train employees exposed to TWAs of 85 dB and above at least annually in the effects of noise; the purpose, advantages, and disadvantages of various types of hearing protectors; the selection, fit, and care of protectors; and the purpose and procedures of audiometric testing.
- Your visibility helps when you walk around and observe!
- Excuses
  - I forgot to get them
  - I wanted to listen to music instead
  - I have them in my pocket
  - We ran out of them




I SAID, MP3 PLAYERS MIGHT CAUSE HEARING LOSS!!
WHAT?!
NEWS
TEEN HEALTH STUDY

Questions?